(a) [contacting] bringing into contact a first substance which includes a peptide fragment of p21, or a derivative or analog thereof, comprising an amino acid sequence [molecule which comprises an amino acid sequence] selected from the group consisting of:

RERWNFDFVTETPLEGDFAW (peptide 4) (SEQ ID NO:4);

KACRRLFGPVDSEQLSRDCD (peptide 2) (SEQ ID NO:2);

KxxRRyFz**P** (wherein x may be any amino acid, y and z may be hydrophobic, and each of the bold residues may be absent or different); (SEQ ID NO:14)

KRRQTSMTDFYHSKRRLIFS (peptide 10) (SEQ ID NO:10);

KRRQTSATDFYHSKRRLIFS [(peptide 10)] (SEQ ID NO:28);

TSMTDFYHSKRRLIFSKRKP (peptide 11) (SEQ ID NO:11);

KRRLIFSK (SEQ ID NO:23); and

xyLzF (wherein y and z are any amino acid and x is preferably R),

[or a derivative, fragment or analog of said fragment,] with a second substance comprising cyclin D1 and/or Cdk4, or a derivative or analog thereof, and [with] a test compound, under conditions wherein, in the absence of the test compound being an inhibitor of interaction or binding of said first and second substances, said [fragment] first substance and said second substance interact or bind; and

(b) determining interaction or binding between said [fragment] first substance and said second substance.

3. (Amended) The method according to [claim 1 or] claim 2 wherein the fragment, derivative or analog of p21 comprises the amino acid sequence of peptide 4.

4. (Twice Amended) The method according to [claim 1] or claim 2 wherein the fragment, derivative or analog of p21 comprises the amino acid sequence **K**xxRRyFz**P** (SEQ ID NO:14).

cn's
Sub C 1

5. The method according to claim 4 wherein the fragment, derivative or analog of p21 comprises the amino acid sequence of peptide 2.

B6

6. (Amended) The method according to [claim 1 or] claim 2 wherein the fragment, derivative or analog of p21 comprises the amino acid sequence xyLzF.

7. The method according to claim 6 wherein the fragment, derivative or analog of p21 comprises the amino acid sequence of peptide 10.

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8. (Twice Amended) The method according to claim 6 wherein the fragment, derivative or analog of p21 comprises the amino acid sequence KRRLIFSK (SEQ ID NO:23).

Sub C 2

9. The method according to claim 8 wherein the fragment, derivative or analog of p21 comprises the amino acid sequence of peptide 11.

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10. (Amended) The method according to [any of claims 1 or] claim 2 further comprising testing the ability of the compound to modulate a p21- mediated effect on Cdk4 activity.

11. A method according to claim 10 wherein RB phosphorylation is tested.

Sub C 3

12. A method according to claim [10] 1 or 2 wherein induction of G1 cell-cycle arrest is tested.

17. (Amended) A method comprising [identifying] obtaining a compound which interferes with interaction or binding between p21 and cyclin D1 and/or Cdk4 and/or modulates a p21-mediated effect on Cdk4 activity in accordance with [any of claims 1 or] claim 2, further comprising formulating the compound into a composition including at least one additional component.

31. (Twice Amended) A method of treating a hyperproliferative disorder in a cell which comprises contacting the cell with or causing the cell to express a substance selected from the group consisting of:

(i) a fragment of p21, or an active portion or derivative thereof;

(ii) a peptide fragment including the motif xyLzF, wherein y and z are any amino acid and x derivative of said peptide fragment inhibiting Cdk4;

(iii) a peptide fragment including the motif **K**xxRRyFz**P** (SEQ ID NO:14), wherein x is any amino acid, y and z may be hydrophobic, and each of the bold residues may be absent or different; and

(iv) a functional mimetic of (i), (ii) or (iii) with the property of inhibiting Cdk4; such that a hyperproliferative disorder is treated.

32. (Twice Amended) The method of claim 31 wherein the substance comprises or consists essentially of a peptide fragment with a sequence which is selected from the group consisting of:

RERWNFDFVTETPLEGDFAW (peptide 4) (SEQ ID NO:4);

KACRRLFGPVDSEQLSRDCD (peptide 2) (SEQ ID NO:2);

KRRQTSMTDFYHSKRRLIFS (peptide 10) (SEQ ID NO:10);

KRRQTSATDFYHSKRRLIFS [(peptide 10)] (SEQ ID NO:28);

TSMTDFYHSKRRLIFSKRKP (peptide 11) (SEQ ID NO:11);

and KRRLIFSK (SEQ ID NO:23),

or a functional mimetic of any of these peptide sequences with the property of inhibiting Cdk4.

B10 Cont

33. (Twice Amended) The method of claim 32 wherein the substance consists essentially of the peptide KRRLIFSK (SEQ ID NO:23) or a functional mimetic thereof which inhibits Cdk4.

34. The method of any of claims 31 to 33 wherein the substance is coupled to a carrier for delivery to cells.

35. (Twice Amended) The method of claim 34 wherein the substance is a peptide and is coupled to a carrier peptide with the sequence RQIKIWFQNRRMKWKK (SEQ ID NO:15).

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36. (Twice Amended) A method of ameliorating a disorder characterized by abnormal cell proliferation comprising contacting a cell with the peptide KRRLIFSK (SEQ ID NO:23), or a functional mimetic thereof with the property of inhibiting Cdk4 such that abnormal cell proliferation is ameliorated.

37. The method according to claim 36, wherein the disorder is a hyperproliferative disorder.

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38. (Twice Amended) A method of interfering with interaction between p21 and cyclin D1 and/or Cdk4, comprising contacting p21 and/or Cdk4 with a substance which includes a peptide fragment of p21 or a derivative thereof which is selected from the group consisting of:

RERWNFDFVTETPLEGDFAW (peptide 4) (SEQ ID NO:4);

KACRRLFGPVDSEQLSRDCD (peptide 2) (SEQ ID NO:2);

KxxRRyFz**P** (wherein x may be any amino acid, y and z may be hydrophobic, and each of the bold residues may be absent or different) (SEQ ID NO:14);

KRRQTSMTDFYHSKRRLIFS (peptide 10) (SEQ ID NO:10);

KRRQTSATDFYHSKRRLIFS [(peptide 10)] (SEQ ID NO:28);

TSMTDFYHSKRRLIFSKRKP (peptide 11) (SEQ ID NO:11);

KRRLIFSK (SEQ ID NO:23); and

xyLzF (wherein y and z are any amino acid and x is preferably R);

or a derivative, fragment, analog or functional mimetic of said fragment.

39. (Twice Amended) A method of modulating a p2l-mediated effect on Cdk4 activity, the method including contacting p21 and/or Cdk4 with a substance which comprises a peptide fragment of p21, or a derivative thereof, which is selected from the group consisting of:

RERWNFDFVTETPLEGDFAW (peptide 4) (SEQ ID NO:4);

KACRRLFGPVDSEQLSRDCD (peptide 2) (SEQ ID NO:2);

KxxRRyFz**P** (wherein x may be any amino acid, y and z may be hydrophobic, and each of the bold residues may be absent or different) (SEQ ID NO:14);

KRRQTSMTDFYHSKRRLIFS (peptide 10) (SEQ ID NO:10);

KRRQTSATDFYHSKRRLIFS [(peptide 10)] (SEQ ID NO:28);

TSMTDFYHSKRRLIFSKRKP (peptide 11) (SEQ ID NO:11);

KRRLIFSK (SEQ ID NO:23); and

xyLzF (wherein y and z are any amino acid and x is preferably R);

or a derivative, fragment, analog or functional mimetic of a said fragment.